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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/492,300	01/27/2000	Toshitaka Agano	Q55891	9715

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT PAPER NUMBER

2629

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/492,300

Applicant(s)

AGANO, TOSHITAKA

Examiner

Jennifer T. Nguyen

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-22 and 24-37 is/are rejected.
- 7) ☒ Claim(s) 16 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-8-05, 12-2-05

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETMLED ACTION

1. This Office Action is responsive to Amendment filed on 12/2/05.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Beeteson (Patent No. Us 5,196,382).

Regarding claim 1, referring to Fig. 2, Beeteson teaches a display device, having:
at least two sets of luminance (50 and 55) including an image maximum luminance for displaying an image (i.e., displaying whole surface of the LCD) and an ordinary maximum luminance for displaying non-image information (i.e., displaying window icon or typing text), said ordinary maximum luminance being lower than said image maximum luminance (col. 1, lines 41-45 and col. 2, lines 40-55).

Claim Rejections - 35 USC § 103

4. Claims 2-7, 10, 12, 13, 18, 28, 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382) in view of Ito (Patent No. US 6, 144,064).

Regarding claims 2-4 and 28, 31, 34, Beeteson differs from claims in that he does not specifically teach a luminance switching unit has a selection unit which makes adjustment to the brightness of the display depending on the image maximum luminance in a case of display of only the image and makes adjustment to the brightness of display depending on said ordinary

Art Unit: 2629

maximum luminance and the brightness of display depending on said image maximum luminance. However, lto teaches a luminance switching unit has a selection unit (e.g., 2 of lto) which makes adjustment to the brightness of the display depending on the image maximum luminance (EL1 and EL3) in a case of display of only the image and makes adjustment to the brightness of display depending on said ordinary maximum luminance (i.e., EL2) and the brightness of display depending on said image maximum luminance (col. 1, lines 50-61 of lto). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the switching unit as taught y lto in the system of Beeteson in order to easily control the brightness of display.

Regarding claim 5, the combination of Beeteson and lto teaches that an entire display screen is adjusted to a brightness of display not higher than said ordinary maximum luminance in accordance with an operation using graphical user interface (col. 1, lines 50-61 of lto).

Regarding claim 6, the combination of Beeteson and lto teaches adjustment of a brightness of display in relation to an ordinary maximum luminance and a maximum luminance is performed by adjustment of a light source (col. 1, lines 1 1-17 of lto).

Regarding claim 7, Beeteson teaches the non-image information comprises textual information (col. 2, lines 40-55).

Regarding claims 10 and 12, the combination of Beeteson and lto teaches adjustment of brightness of display in relation to said ordinary maximum luminance and said image maximum luminance is performed by adjusting of light source for display (col. 1, lines 50-61 of lto).

Regarding claims 13 and 18, the combination of Beeteson and lto teaches a light source

Art Unit: 2629

control unit (i.e., inverters 1-3) which controls current through each of the multiple light sources independently to increase brightness in display screen (col. 1, lines 50-61 of Ito).

5. Claim 20, 21, 27, 30, 32, 33, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382) in view of Reinhardt (Patent No. US 5,598,565).

Beeteson differs from claims in that he does not specifically teach the region of the display screen corresponds to one of the image and the non-image information and the another region of the display screen corresponds to another of the image and non-image information. However, referring to Fig. 3, Reinhardt teaches a region of the display screen corresponds to the image (320) and the another region of the display screen corresponds to another of the image and non-image information (310, 330). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the display screen as taught by Reinhardt in the system of Beeteson in order to display the information to viewer efficiently.

6. Claim 8, 9, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382) in view of Ito (Patent No. US 6,144,164) and further in view of Tew et al. (Patent No. US 6,232,963).

Regarding claims 8, 9, 25 and 26, the combination of Beeteson and Ito differs from claims in that it does not specifically teach the image is displayed at a maximum luminance level for the display represented by n bits and wherein the non-image information is displayed at a maximum level represented by less than n bits or n-3 bits. The combination of Ito and

Reinhardt teaches the image is displayed at a maximum luminance level and the non-image information is displayed at a maximum level which is lower than the maximum luminance level of the image. Moreover, Tew teaches greater bit-weights are display with more illumination than bit-planes having smaller bit-weights (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the bit-weights as taught by Tew in the system of the combination of Beeteson and Ito in order to design a desired brightness level for display.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382) in view of Ito (Patent No. US 6,144, 164) and further in view of Saito et al. (Patent No. US 5,315,695).

Regarding claim 11, the combination of Beeteson and Ito differs from claims in that it does not specifically teaches adjustment of the light source comprises increasing or decreasing current through the light source. However, Saito teaches the current amount to be supplied to the light source become greater, the light source emits more light so as to raise the luminance of the display (col. 4, lines 32-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adjustment of the light source as taught by Saito in the system of the combination of Beeteson and Ito in order to control the brightness of the display efficiently.

Art Unit: 2629

8. Claim 14-15, 17, 29 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382), Ito (Patent No. US 6, 144, 164) in view of Reinhardt (Patent No. US 5,598,565) and further in view of Iwamoto et al. (Patent No. US 6,532,474).

Regarding claims 14-15, 17, 29 and 37, the combination of Beeteson, Ito, and Reinhardt teaches adjusting brightness of the display based on the control signal (i.e., input mode is defined as text, the lower luminance is applied) (col. 2, lines 39-53 of Beeteson). The combination of Beeteson, Ito, and Reinhardt differs from claims in that it does not specifically teach display device receiving a control signal supplied externally to distinguish image and non-image information for display. However, referring to Figs. 7 and 10, Iwamoto teaches display device receiving a control portion (8-1) to distinguish image data and text data for display (col. 10, lines 34-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the distinguish image and text information for display as taught by Iwamoto in the system of the combination of Beeteson, Ito, and Reinhardt in order to provide enough and appropriate brightness for viewer.

9. Claim 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382) in view of Ito (Patent No. US 6,144, 164) and further in view of Hoshi (Patent No. US 6,020,944).

Regarding claims 19 and 24, the combination of Beeteson and Ito differs from claims 19 and 24 in that it does not specifically teach the image maximum luminance is substantially in the range of 400 cd/m² - 10,000 cd/m² and the ordinary maximum luminance is substantially in the range of 40 cd/m² - 400 cd/m². However, Hoshi teaches high luminance is about several

Art Unit: 2629

thousands cd/m² and the lower luminance is substantially in the range of 80- 120 cd/m² (col. 2, lines 26-30). Therefore, it would have been obvious to obtain the range of the luminance level as taught by Hoshi in the system of the combination of Beeteson and Ito in order to provide enough luminance to view the image accurately.

10. Claims 22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeteson (Patent No. US 5,796,382) in view of Ito (Patent No. US 6, 144,164) and further in view of Vara et al. (Patent No. US 6,063,030).

Regarding claim 22, the combination of Beeteson and Ito teaches having a plurality of ordinary maximum luminance levels (Fig. 2 of Ito). The combination of Beeteson and Ito differs from claim 22 in that it does not specifically teach a diagnostic apparatus connected to the display device. However, Vara teaches a diagnostic apparatus connected to the display device (col. 5, lines 34-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the diagnostic apparatus as taught by Vara in the system of the combination of Beeteson and Ito in order to perform accurate, bright display image and avoid stress on the viewer's, specially in the medical field.

11. Claims 16 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed 12/2/05 have been fully considered but they are not persuasive.

Applicant's remarks regarding Beeteson on page 9 are not persuasive. Claim 1 does not require a portion of the screen is displaying an image or non-image information to determine the illumination level. Claim 1 requires the display device having an image maximum luminance for displaying an image and an ordinary maximum luminance for displaying non-image information. Beeteson teaches when the display device using a whole surface of the LCD to display image information, all backlight lamps are turned on, this corresponds to the display screen having a maximum luminance, when the display device using a portion surface to display non-image information (a window icon or typing text), only one backlight lamp is turned on, this corresponds to an ordinary maximum luminance for displaying non-image information as claimed.

Applicant's remarks regarding claims 8, 9 on pages 10-11 are not persuasive since applicant is reading limitation into the claims.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2629

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7693. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-dgect.uspto.gov>. Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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3/27/06



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